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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,797	11/19/2003	Amir Abolfathi	AT-000218 US	8590

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EXAMINER	
O CONNOR, CARY E	
ART UNIT	**PAPER NUMBER**
3732	

DATE MAILED: 02/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/717,797	ABOLFATHI ET AL	
	Examiner	Art Unit	
	Cary E. O'Connor	3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6-16 and 18-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 6-16 18-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5, 7-16, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coscina (3,878,610) in view of Chartrand (2,426,388). Coscina shows a dental tray 10 comprising a base 26 having a plurality of prongs, a first wall 28 extending from one side of the base, at least one tearable portion formed on one end of one prong, the detachable portion being removable to shorten the prong length (see column 7, lines 36+). Coscina does not disclose at least two tearable portions formed on an end of each prong but does disclose that the tray 'should facilitate easy sectionalization and trimming of the wall portions to accommodate the individual patient' (column 7, lines 41-43). In view of the desire for adjustability, it is held that it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide any number of tearable portions (including two) so as to make the tray as adjustable as possible and since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8." The tray of Coscina does not include openings in the base or walls. Chartrand shows a dental impression tray having openings 10 in the base and walls to secure the impression material in the tray when it is removed from the mouth

(column 3, lines 33-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the base and wall of Coscina with openings therethrough, in view of Chartrand, in order to provide a means for holding the impression material in the tray upon removal of the tray from the mouth. As to claims 2 and 3, note that the detachable portion and the first wall are curved to eliminate sharp edges and corners, as can be seen in Figures 2 and 7. As to claim 7, note that the tray of Coscina includes a second wall 30. As to claims 9 and 14, note that the tray of Chartrand may be made of lead (column 3, last line), which is inherently radiopaque, as evidenced by Chandra (5,935,638) in column 3, lines 57-62. It would have been obvious to one of ordinary skill in the art to form the tray of Coscina from lead, in view of Chartrand, because it is considered an art equivalent material for impression trays. As to claims 10 and 11, the prongs are interconnected by an arcuate portion. As to claim 12, the tray is considered to be capable of being positioned in a radiographic scanner and it has been held that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). As to claim 13, note that Coscina may comprise a system which includes upper and lower dental trays (column 3, lines 15-39).

Claims 1, 4-5, 7-16, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skarky (4,432,728) in view of Chartrand (2,426,388). Skarky shows a dental tray 10 comprising a base 12 having a plurality of prongs, a first wall 32 extending from one side of the base, two tearable portions formed on one end of each prong (see lines of weakness 90, 94, 98 and 102), the detachable portion being removable to shorten the prong length (see column 4, lines 48). The tray of Skarky does not include openings in the base or walls. Chartrand shows a dental impression tray having openings 10 in the base and walls to secure the impression material in the tray when it is removed from the mouth (column 3, lines 33-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the base and wall of Skarky with opening therethrough, in view of Chartrand, in order to provide a means for holding the impression material in the tray upon removal of the tray from the mouth. As to claim 7, note that the tray of Skarky includes a second wall 42. As to claims 9 and 14, note that the tray of Chartrand may be made of lead (column 3, last line), which is inherently radiopaque, as evidenced by Chandra (5,935,638) in column 3, lines 57-62. It would have been obvious to one of ordinary skill in the art to form the tray of Skarky from lead, in view of Chartrand, because it is considered an art equivalent material for impression trays. As to claims 10 and 11, the prongs are interconnected by an arcuate portion. As to claim 12, the tray is considered to be capable of being positioned in a radiographic scanner and it has been held that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably

distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). As to claim 13, note that Skarky may comprise a system which includes upper and lower dental trays connected together.

Claims 18 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coscina (3,878,610) in view of Chartrand (2,426,388) and Halverson et al (4,763,791). Coscina shows a dental tray 10 comprising a base 26 having a plurality of prongs, a first wall 28 extending from one side of the base, and at least one tearable portion formed on one end of one prong, the detachable portion being removable to shorten the prong length (see column 7, lines 36+). Coscina does not disclose at least two tearable portions formed on an end of each prong but does disclose that the tray 'should facilitate easy sectionalization and trimming of the wall portions to accommodate the individual patient' (column 7, lines 41-43). In view of the desire for adjustability, it is held that it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide any number of tearable portions (including two) so as to make the tray as adjustable as possible and since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8." The tray of Coscina does not include openings in the base or walls. Chartrand shows a dental impression tray having openings 10 in the base and walls to secure the impression material in the tray when it is removed from

the mouth (column 3, lines 33-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the base and wall of Coscina with opening therethrough, in view of Chartrand, in order to provide a means for holding the impression material in the tray upon removal of the tray from the mouth. Coscina only shows a single tearable portion in each of the arms. However, Coscina does disclose that the tray "should facilitate easy sectionalization and trimming of the wall portions to accommodate the individual patient" (column 7, lines 41-43). In view of the desire for adjustability, it is held that it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide any number of tearable portions (including two) so as to make the tray as adjustable as possible and since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Halverson shows an impression kit having both upper and lower trays. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the tray of Coscina as modified by Chartrand in kit form comprising both upper and lower trays, in view of Halverson, because usually impressions are needed for both the upper and lower jaws. Halverson also includes a container for holding the trays. It would have also been obvious to one of ordinary skill in the art to provide the system with a container so that all the components needed to take an impression are stored together and easily accessible.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coscina (3,878,610) in view of Chartrand (2,426,388) and Halverson et al

(4,763,791) as applied to claim18 above, and further in view of Kaza (2003/0129565). The system of Coscina, Chartrand and Halverson does not include a radiographic scanner, as claimed. Kaza shows a scanner 800 comprising a radiation source 802, a scintillator 812, a radiation detector 820, and a rotatable table 804 positioned between the radiation source and the scintillator. The scanner is used to scan a dental impression 810 and eliminates the need to pour plaster models of the teeth. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the system of Coscina, Chartrand and Halverson, with the scanner show by Kaza, in order to eliminate the need to pour plaster models of the teeth.

Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coscina (3,878,610) in view of Chartrand (2,426,388) and Halverson et al (4,763,791) as applied to claim 18 above, and further in view of Bublewitz et al (2002/0156186). Chartrand does not disclose the specific composition of the impression material. Bublewitz discloses an impression material comprising a radiopaque material (paragraph 0112) and PVS (paragraph 0109). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an impression material containing a radiopaque material and PVS, as taught by Bublewitz, in the impression tray of Coscina and Chartrand, so that the impression may be scanned to form a digital model of the mouth.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coscina (3,878,610) in view of Chartrand (2,426,388), Halverson et al (4,763,791) and Bublewitz et al (2002/0156186) as applied to claim 21 above, and further in view of

Jagmin (5,044,955). The radiopaque material of Bublewitz is mixed in the impression material, not coated on the surface. Jagmin teaches that a radiopaque material may be sprayed on a surface to make the surface more visible to X-ray (column 4, lines 11-25). It would have been obvious to spray a radiopaque layer on the impression formed by the impression tray of Coscina and Chartrand, in view of Jagmin, so that a common impression material may be used and the impression can be made visible to a scanner if so desired.

Claims 18 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skarky (3,878,610) in view of Chartrand (2,426,388) and Halverson et al (4,763,791). Skarky shows a dental tray 10 comprising a base 12 having a plurality of prongs, a first wall 32 extending from one side of the base, two tearable portions formed on one end of each prong (see lines of weakness 90, 94, 98 and 102), the detachable portion being removable to shorten the prong length (see column 4, lines 48). The tray of Skarky does not include openings in the base or walls. Chartrand shows a dental impression tray having openings 10 in the base and walls to secure the impression material in the tray when it is removed from the mouth (column 3, lines 33-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the base and wall of Skarky with opening therethrough, in view of Chartrand, in order to provide a means for holding the impression material in the tray upon removal of the tray from the mouth. Halverson shows an impression kit having both upper and lower trays. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the tray of Skarky as modified by Chartrand in kit form

comprising both upper and lower trays, in view of Halverson, because usually impressions are needed for both the upper and lower jaws. Halverson also includes a container for holding the trays. It would have also been obvious to one of ordinary skill in the art to provide the system with a container so that all the components needed to take an impression are stored together and easily accessible.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skarky (3,878,610) in view of Chartrand (2,426,388) and Halverson et al (4,763,791) as applied to claim18 above, and further in view of Kaza (2003/0129565). The system of Skarky, Chartrand and Halverson does not include a radiographic scanner, as claimed. Kaza shows a scanner 800 comprising a radiation source 802, a scintillator 812, a radiation detector 820, and a rotatable table 804 positioned between the radiation source and the scintillator. The scanner is used to scan a dental impression 810 and eliminates the need to pour plaster models of the teeth. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the system of Skarky, Chartrand and Halverson, with the scanner show by Kaza, in order to eliminate the need to pour plaster models of the teeth.

Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skarky (3,878,610) in view of Chartrand (2,426,388) and Halverson et al (4,763,791) as applied to claim 18 above, and further in view of Bublewitz et al (2002/0156186). Neither Skarky nor Chartrand disclose the specific composition of the impression material. Bublewitz discloses an impression material comprising a radiopaque material (paragraph 0112) and PVS (paragraph 0109). It would have been obvious to one of

ordinary skill in the art at the time the invention was made to use an impression material containing a radiopaque material and PVS, as taught by Bublewitz, in the impression tray of Skarky and Chartrand, so that the impression may be scanned to form a digital model of the mouth.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Skarky (3,878,610) in view of Chartrand (2,426,388), Halverson et al (4,763,791) and Bublewitz et al (2002/0156186) as applied to claim 21 above, and further in view of Jagmin (5,044,955). The radiopaque material of Bublewitz is mixed in the impression material, not coated on the surface. Jagmin teaches that a radiopaque material may be sprayed on a surface to make the surface more visible to X-ray (column 4, lines 11-25). It would have been obvious to spray a radiopaque layer on the impression formed by the impression tray of Skarky and Chartrand, in view of Jagmin, so that a common impression material may be used and the impression can be made visible to a scanner if so desired.

Response to Arguments

Applicant's arguments filed November 14, 2006 have been fully considered but they are not persuasive. In response to applicant's argument that the score lines of Coscina are used for a different purpose and are not useful for adjusting the length to fit to a particular patient's physiology, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the

prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Applicant appears to think that the instant invention would provide more adjustability than the prior art trays. However, applicant's tray does not appear to be any more adjustable than a prior art tray with two tearable portions i.e. adjustability of both the prior art tray and applicant's tray are limited to tearing off one or two portions of each prong.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cary E. O'Connor whose telephone number is 571-272-4715. The examiner can normally be reached on M-Th 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on 571-272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cary E. O'Connor
Primary Examiner
Art Unit 3732

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